AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended): A programmer for a medical device comprising:

an internal antenna mounted within a programmer housing, wherein the internal antenna defines an aperture; and

a battery bay that extends into the programmer in substantial alignment with the aperture, wherein the battery bay extends at least partially into the aperture.

Claim 2 (Original): The programmer of claim 1, wherein the battery bay is oriented such that batteries placed in the battery bay present a load to the internal antenna.

Claim 3 (Original): The programmer of claim 1, wherein the battery bay is oriented such that batteries placed in the battery bay present a load to enhance noise immunity of the internal antenna to external electromagnetic interference.

Claim 4 (Original): The programmer of claim 1, wherein the battery bay is sized to accommodate AAA batteries.

Claim 5 (Original): The programmer of claim 1, further comprising:

a first housing member;

a first circuit board within the first housing member;

a second circuit board disposed over the first circuit board within the first housing member; and

a second housing member disposed over the second circuit board to substantially enclose the first and second circuit boards, wherein the first housing member includes a molded area that defines the battery bay adjacent the first circuit board.

Claim 6 (Original): The programmer of claim 5, further comprising an access opening in the first housing member to gain access to the battery bay for placement of the batteries.

Claim 7 (Currently Amended): The programmer of claim 5, wherein the internal antenna is displaced from the first circuit board and coupled to the first circuit board via a connector ~~an antenna~~.

Claim 8 (Original): The programmer of claim 5, wherein the internal antenna is mounted to the first circuit board on a side of the first circuit board opposite the second circuit board, and a display is mounted to the second circuit board on a side of the second circuit board opposite the first circuit board.

Claim 9 (Original): The programmer of claim 8, wherein the first circuit board includes telemetry circuitry and the second circuit board includes control circuitry to control the display and the telemetry circuitry, the programmer further comprising an electrical interface between the first and second circuit boards.

Claim 10 (Canceled).

Claim 11 (Previously Presented): The programmer of claim 9, wherein the medical device is an implantable neurostimulator, and wherein the telemetry circuitry transmits signals to the implantable neurostimulator via the antenna and processes signals received from the implantable neurostimulator via the antenna.

Claim 12 (Original): The programmer of claim 9, wherein the display is a liquid crystal display.

Claim 13 (Original): The programmer of claim 1, further comprising an external antenna coupled to the programmer via a cable.

Claim 14 (Canceled).

Claim 15 (Original): The programmer of claim 1, wherein the internal antenna comprises a plastic frame wound with conductive winding.

Claim 16 (Original): The programmer of claim 15, wherein the internal antenna comprises copper braid shielding substantially surrounding the plastic frame and the conductive winding.

Claim 17 (Original): The programmer of clam 1, wherein the internal antenna comprises a loop-like shape that defines the aperture.

Claim 18 (Previously Presented): The programmer of claim 1, wherein the medical device is an implantable neurostimulator.

Claim 19 (Previously Presented): A programmer for a medical device comprising:

a programmer housing;

an internal antenna mounted within the programmer housing, wherein the internal antenna defines an aperture; and

a battery bay formed within the programming housing, the battery bay being aligned substantially concentrically with the aperture.

Claim 20 (Previously Presented): The programmer of claim 19, wherein the battery bay is oriented such that batteries placed in the battery bay present a load to the internal antenna.

Claim 21 (Previously Presented): The programmer of claim 19, wherein the battery bay is oriented such that batteries placed in the battery bay present a load to enhance noise immunity of the internal antenna to external electromagnetic interference.

Claim 22 (Previously Presented): The programmer of claim 19, wherein the battery bay is sized to accommodate AAA batteries.

Claim 23 (Previously Presented): The programmer of claim 19, further comprising:

a first housing member;

a first circuit board within the first housing member;

a second circuit board disposed over the first circuit board within the first housing member; and

a second housing member disposed over the second circuit board to substantially enclose the first and second circuit boards, wherein the first housing member includes a molded area that defines the battery bay adjacent the first circuit board.

Claim 24 (Previously Presented): The programmer of claim 23, further comprising an access opening in the first housing member to gain access to the battery bay for placement of the batteries.

Claim 25 (Currently Amended): The programmer of claim 23, wherein the internal antenna is displaced from the first circuit board and coupled to the first circuit board via a connector ~~an antenna~~.

Claim 26 (Previously Presented): The programmer of claim 23, wherein the internal antenna is mounted to the first circuit board on a side of the first circuit board opposite the second circuit board, and a display is mounted to the second circuit board on a side of the second circuit board opposite the first circuit board.

Claim 27 (Previously Presented): The programmer of claim 26, wherein the first circuit board includes telemetry circuitry and the second circuit board includes control circuitry to control the display and the telemetry circuitry, the programmer further comprising an electrical interface between the first and second circuit boards.

Claim 28 (Previously Presented): The programmer of claim 26, wherein the telemetry circuitry transmits signals to the implantable neurostimulator via the antenna and processes signals received from the medical device via the antenna.

Claim 29 (Previously Presented): The programmer of claim 26, wherein the display is a liquid crystal display.

Claim 30 (Previously Presented): The programmer of claim 19, further comprising an external antenna coupled to the programmer via a cable.

Claim 31 (Previously Presented): The programmer of claim 19, wherein the internal antenna comprises a plastic frame wound with conductive winding.

Claim 32 (Previously Presented): The programmer of claim 31, wherein the internal antenna comprises copper braid shielding substantially surrounding the plastic frame and the conductive winding.

Claim 33 (Previously Presented): The programmer of clam 19, wherein the internal antenna comprises a loop-like shape that defines the aperture.

Claim 34 (Previously Presented): The programmer of claim 19, wherein the medical device is an implantable neurostimulator.

Claim 35 (New): The programmer of claim 1, wherein the antenna is mounted to a circuit board, and a space between the antenna and the circuit board is substantially filled by the battery bay extending into the antenna aperture.

Claim 36 (New): The programmer of claim 19, wherein the antenna is mounted to a circuit board, and a space between the antenna and the circuit board is substantially filled by the battery bay extending into the antenna aperture.